

This listing of "Brief Description Of The Drawings" shall replace all prior versions in the application.

BRIEF DESCRIPTION OF THE DRAWINGS

Sheet Figure 1 of 10 shows the lifting buoy 1, ~~connecting chain or cable~~ connector 4 and a cross section of the pumping mechanism 5,6,7,8,9,10,11,12,15 ~~to be~~ mounted on the bed of the ocean and sea floors.

Sheet Figure 2 of 10 shows the lifting buoy~~1~~, ~~connecting chain or cable~~ connector 4 and a cross section of the pumping mechanism 5,6,7,8,9,10,11,12,15 ~~as to be designed to be~~ imbedded in the bed of the ocean and sea floors.

Sheet Figure 3 of 10 shows the lifting ~~chain~~, connector 4 and a closer look at the cross section of the pumping mechanism 5,6,7,8,9,10,11,12,15 as prepared for imbedding in the ocean floor.

Sheet Figure 4 of 10 shows the weighted piston 8 with "O" rings 9,10 and a cross section 34 revealing the air vent 18 ~~and~~ check valve19.

Sheet Figure 5 of 10 shows the weighted piston 8 without "O" rings and air vent.

Sheet Figure 6 of 10 shows a closer look at the lifting buoy and connections.

Sheet Figure 7 of 10 is an isometric rendition showing what the wave and tidal pump will look like when installed on the bed of the ocean floor.

Applicant has amended claims to comply with Examiner's objections to "alternative" form.

Applicant has amended claims to comply with Examiner's objections to "narrative form".

Amended and new claims are shown on pages 5-8 of this document.

Sheet Figure 8 of 10 is an isometric rendition showing what the wave and tidal pump will look like when installed imbedded in the bed of the ocean floor.

Sheet Figure 9 of 10 is an isometric rendition showing wave and tidal pumps being used in concert and in clusters.

Sheet Figure 10 of 10 is a flow chart showing process applications of this wave and tide actuated pump.

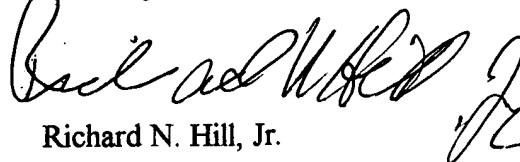
RESPONSE TO CLAIM REJECTIONS UNDER 35 USC § 102

Applicant herewith cites differences not anticipated by Villanueva et al (USPN 4,249,084):

Villanueva's buoy is designed to both lift its' piston and is provided with ballast to drive piston down. This requires a rigid shaft connection between the buoy and piston and physical limits exist as to how long this shaft can be. Villanueva attempts to both draw in and expel fluid on both the upstroke and down stroke making for a cumbersome and applicant alleges, impractical design. Villanueva's design mandates a cylinder that pivots with the wave and tide action. Said cylinder also requires a packing seal between the rigid shaft and cylinder.

Applicant's lifting buoy (1) is designed for lifting purposes only thus providing a much simpler and functional design. The ballast in applicant's invention is in the piston (8) allowing for a flexible connector 4 of unlimited length to be used between the buoy (1) and piston (8). Applicant's pump cylinder (7) is rigidly fixed to its attachment point. Applicant's flexible connector (4) allows. Applicant's simplified system draws fluid in on upstroke only and expels fluid on the down stroke only making for a much simpler and functional design. Applicant's simplified system requires no packing between connector and pump cylinder (7). Applicant's simplified system relies on a unique hawser guide (20) and hawser guide supports (5) to keep piston in alignment with pump cylinder (7). No such hawser mechanism is shown in Villanueva's patent. Applicant's cylinder is equipped with unique upper travel stops (6) to limit piston's upper level of travel. Again, no such mechanism is shown in Villanueva's patent.

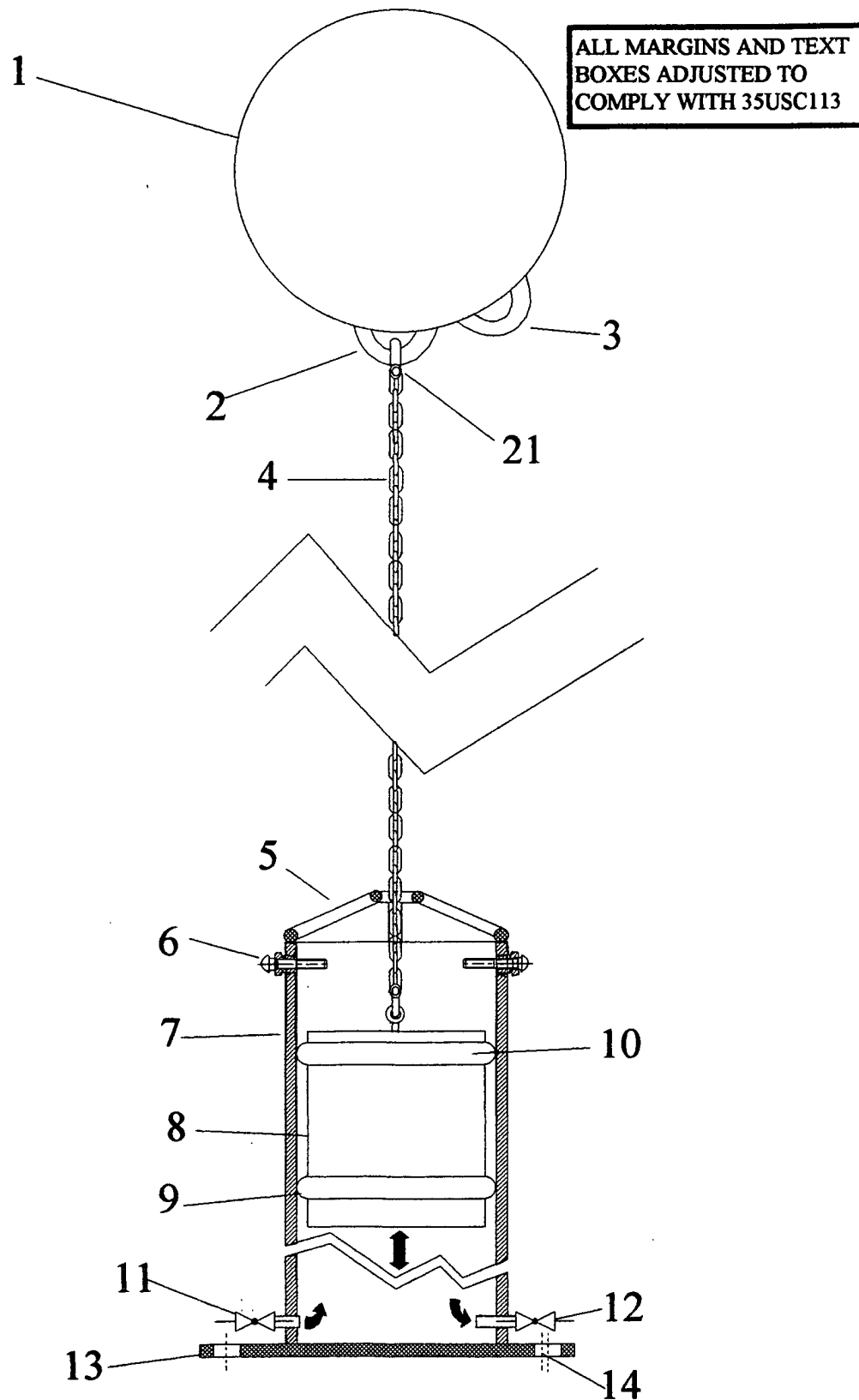
Sincerely,

A handwritten signature in black ink, appearing to read "Richard N. Hill, Jr.", with a stylized flourish at the end.

Richard N. Hill, Jr.

WAVE AND TIDE ACTUATED ENERGY PUMP
INVENTOR: RICHARD NEWTON HILL, JR., TEL: (706) 461-3735

ANNOTATED REPLACEMENT SHEET 1 OF 10 SHOWING CHANGES



WAVE AND TIDE ACTUATED ENERGY PUMP

INVENTOR: RICHARD NEWTON HILL, JR., TEL: (706) 461-3735

ANNOTATED REPLACEMENT SHEET 2 OF 10

ALL MARGINS AND TEXT
BOXES ADJUSTED TO
COMPLY WITH 35USC113

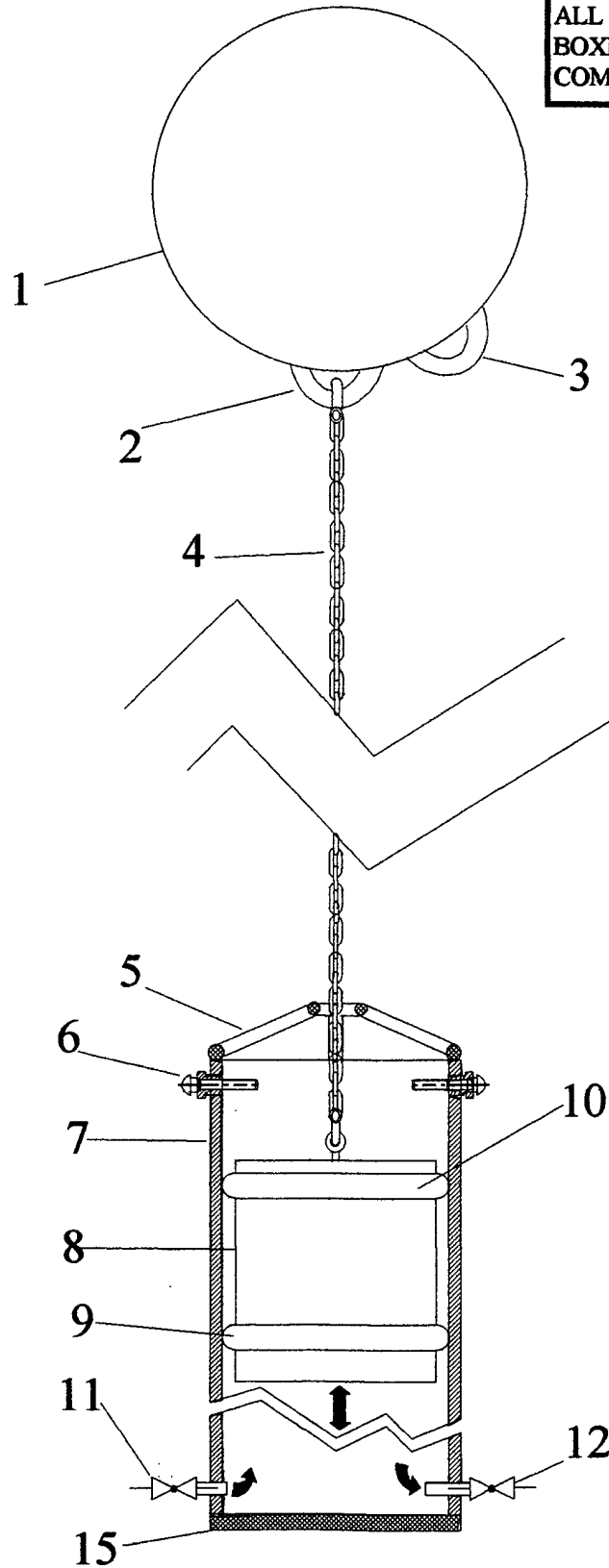
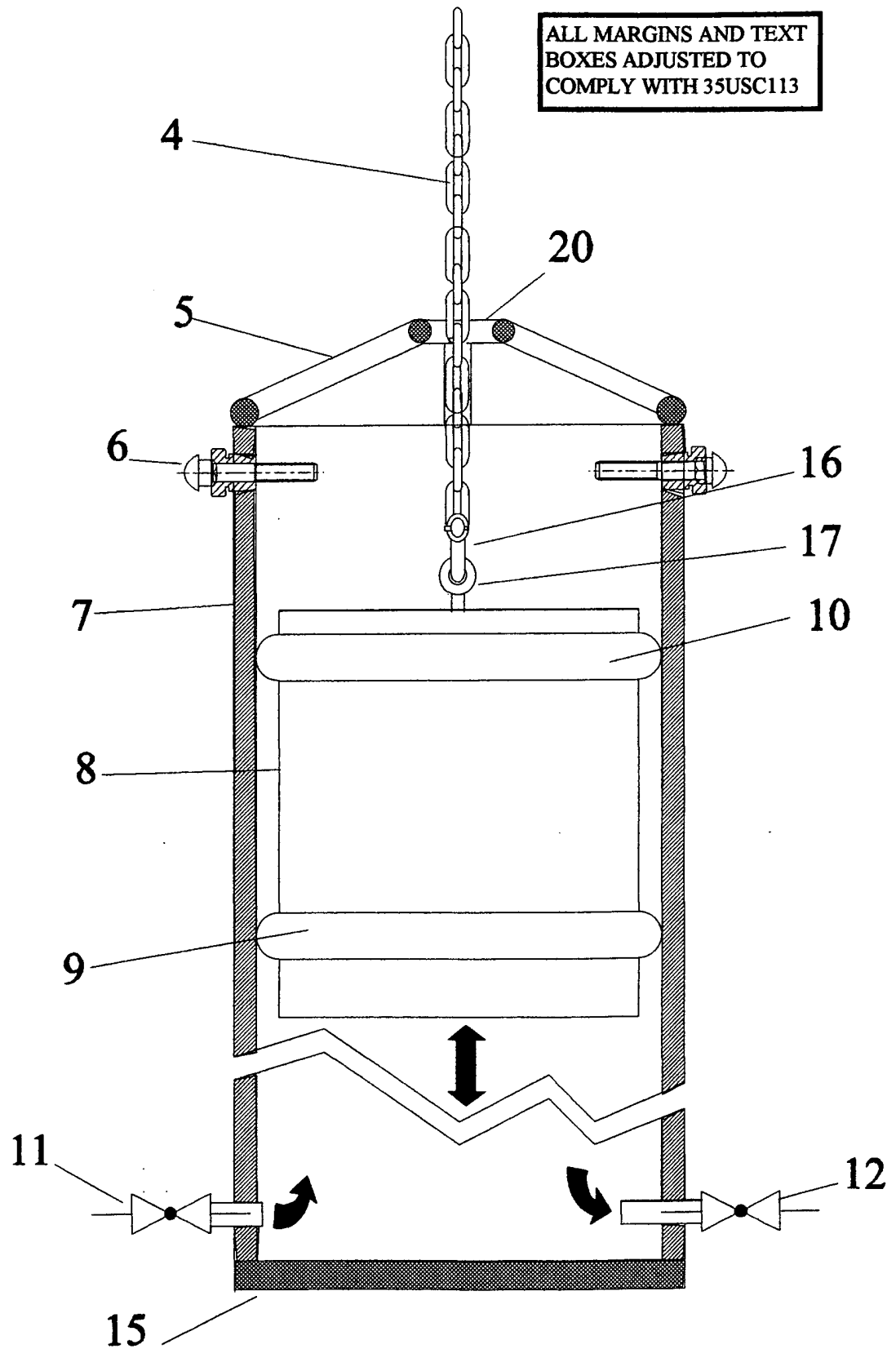


Figure 2

ANNOTATED REPLACEMENT SHEET 3 OF 10

**ALL MARGINS AND TEXT
BOXES ADJUSTED TO
COMPLY WITH 35USC113**



WAVE AND TIDE ACTUATED ENERGY PUMP
INVENTOR: RICHARD NEWTON HILL, JR., TEL:(706)461-3735
ANNOTATED REPLACEMENT SHEET 4 OF 10

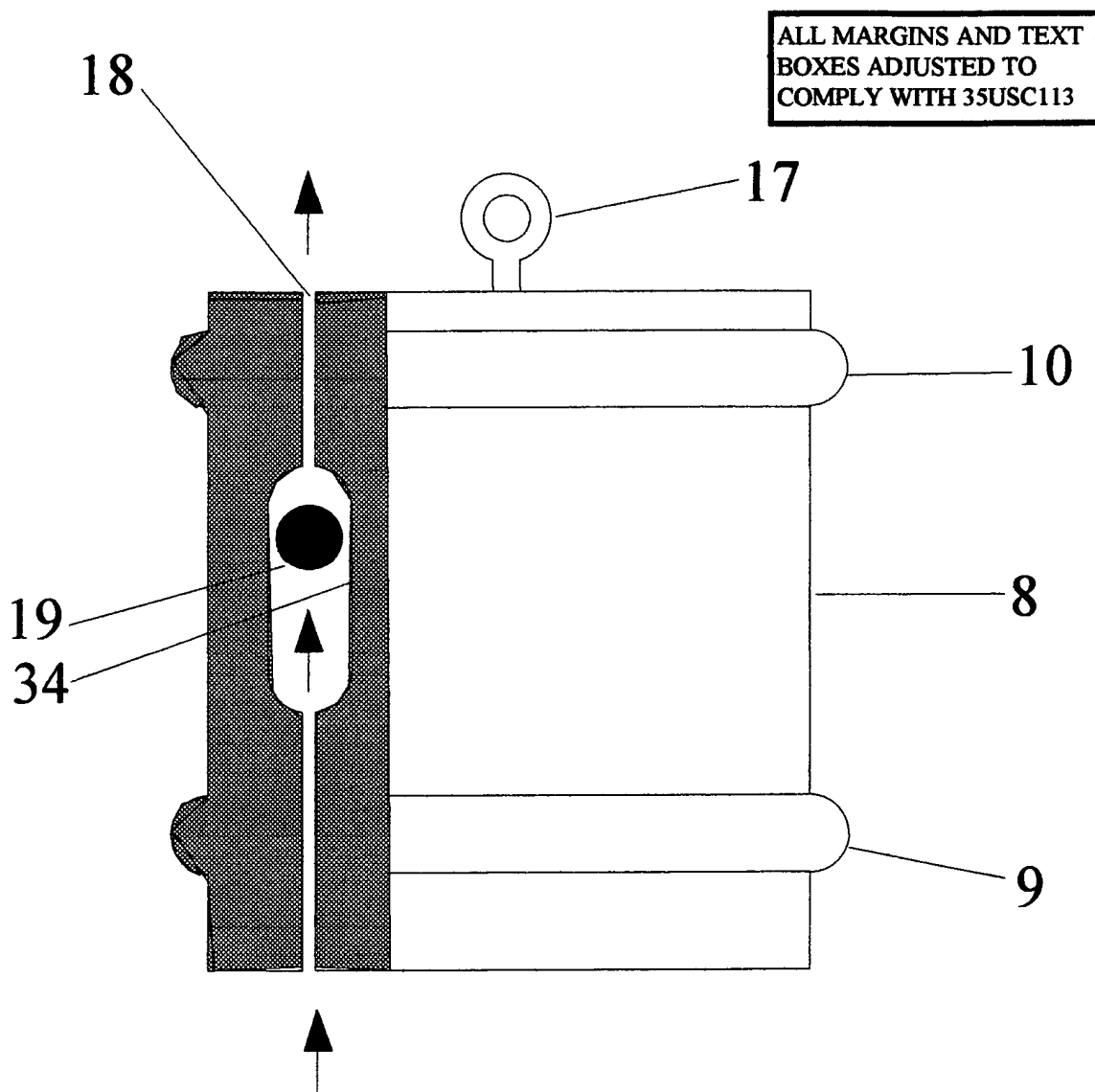


Figure 4

WAVE AND TIDE ACTUATED ENERGY PUMP
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ANNOTATED REPLACEMENT SHEET 5 OF 10

ALL MARGINS AND TEXT
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COMPLY WITH 35USC113

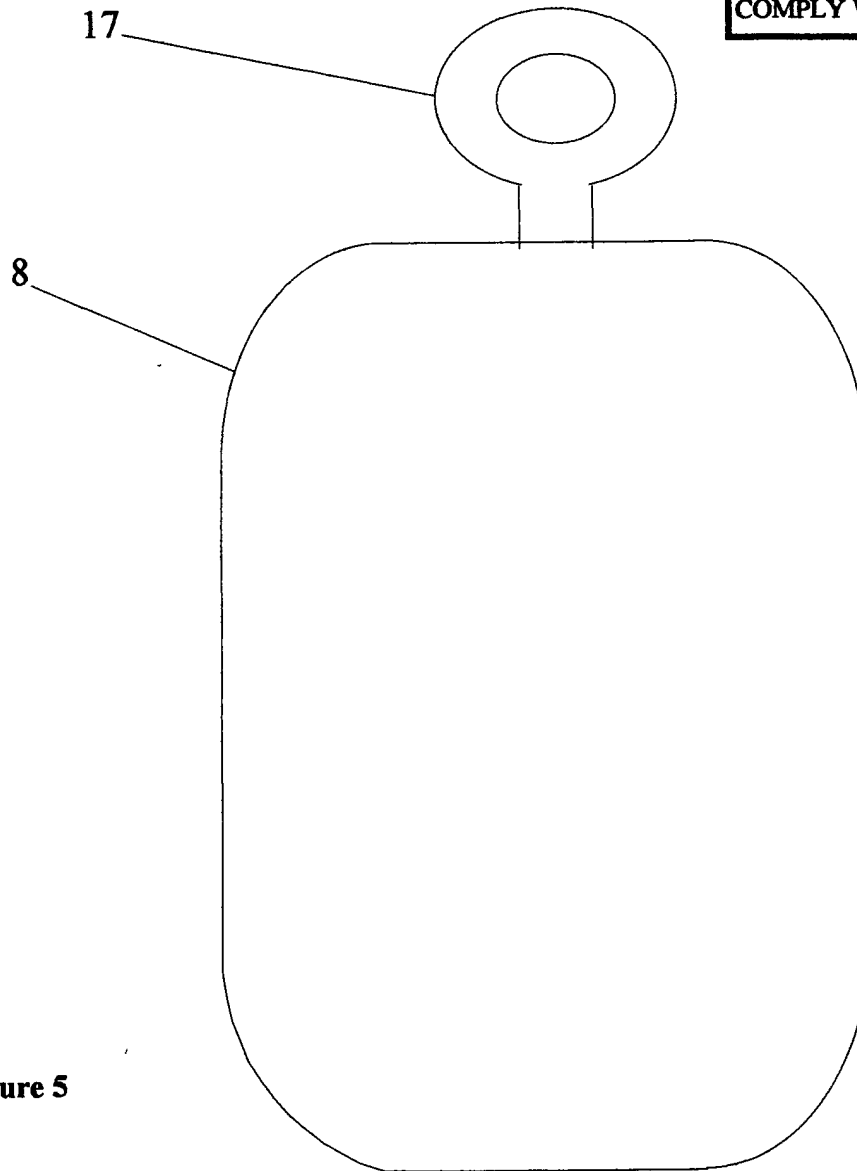


Figure 5

WAVE AND TIDE ACTUATED ENERGY PUMP
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ANNOTATED REPLACEMENT SHEET 6 OF 10

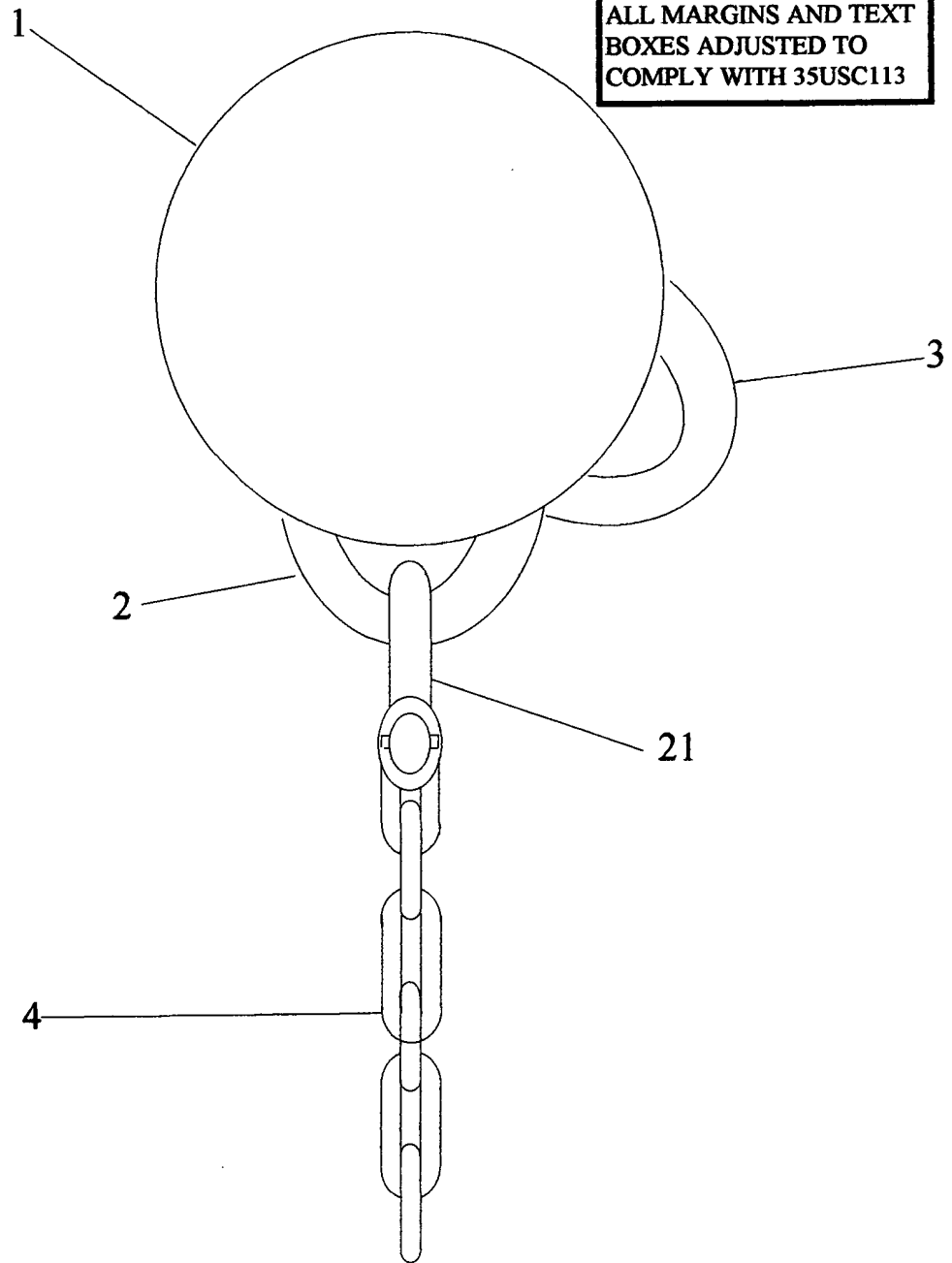
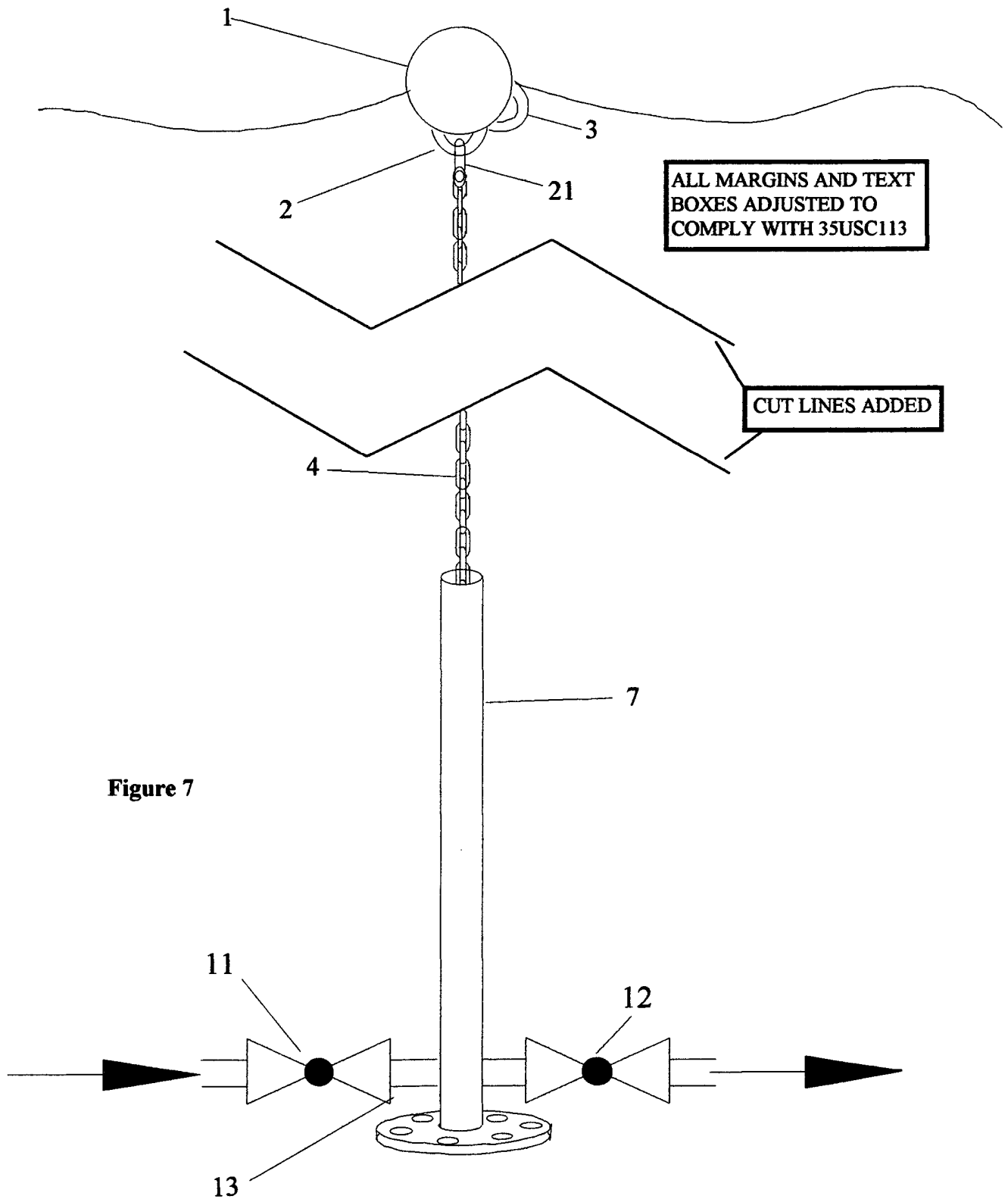


Figure 6

WAVE AND TIDE ACTUATED ENERGY PUMP

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ANNOTATED REPLACEMENT SHEET 7 OF 10



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ALL MARGINS AND TEXT BOXES ADJUSTED TO COMPLY WITH 35USC113

CUT LINES ADDED

Figure 8

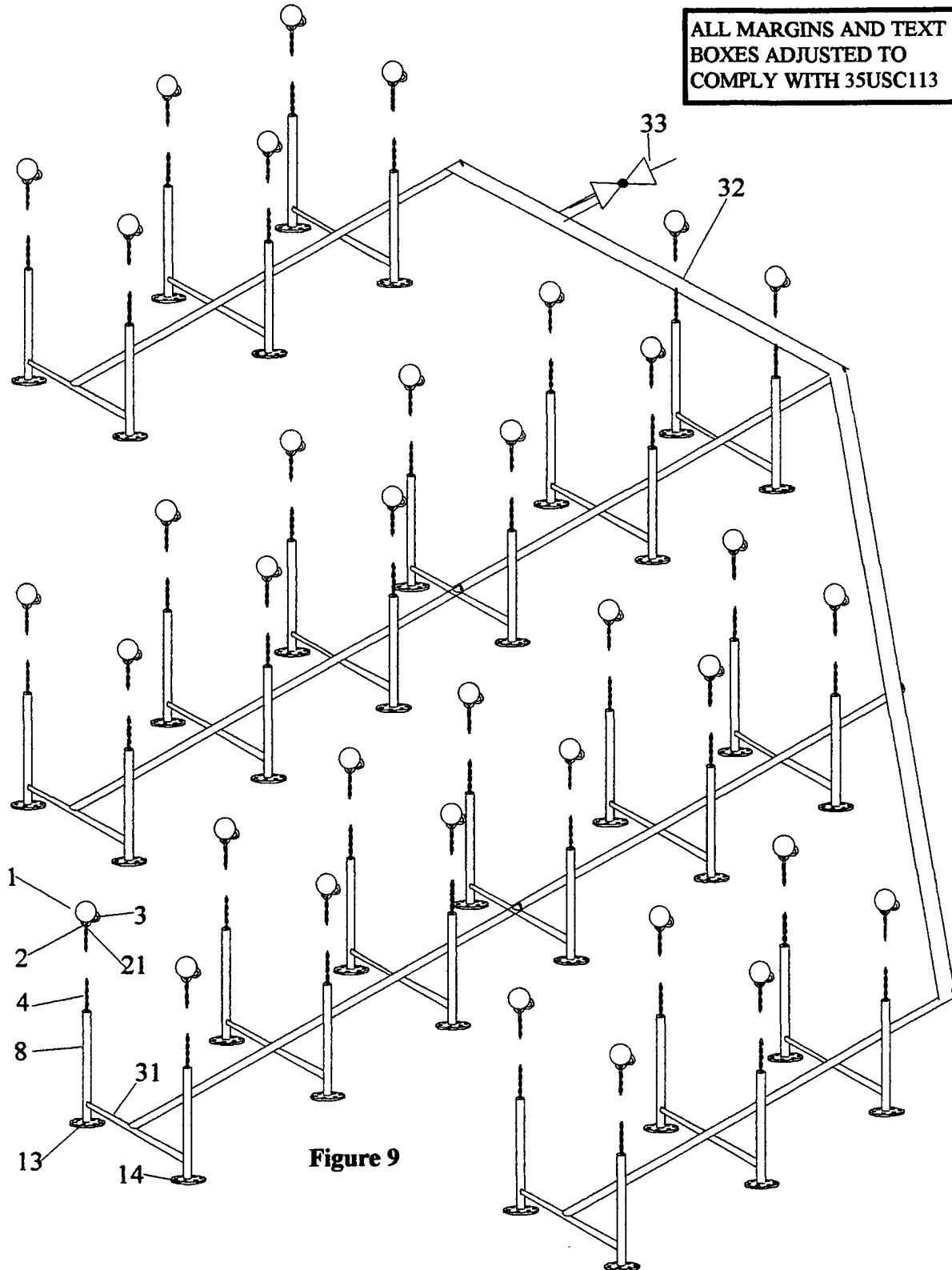
Figure 8

WAVE AND TIDE ACTUATED ENERGY PUMP

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ANNOTATED REPLACEMENT SHEET 9 OF 10

ALL MARGINS AND TEXT
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WAVE AND TIDE ACTUATED ENERGY PUMP

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ANNOTATED REPLACEMENT SHEET 10

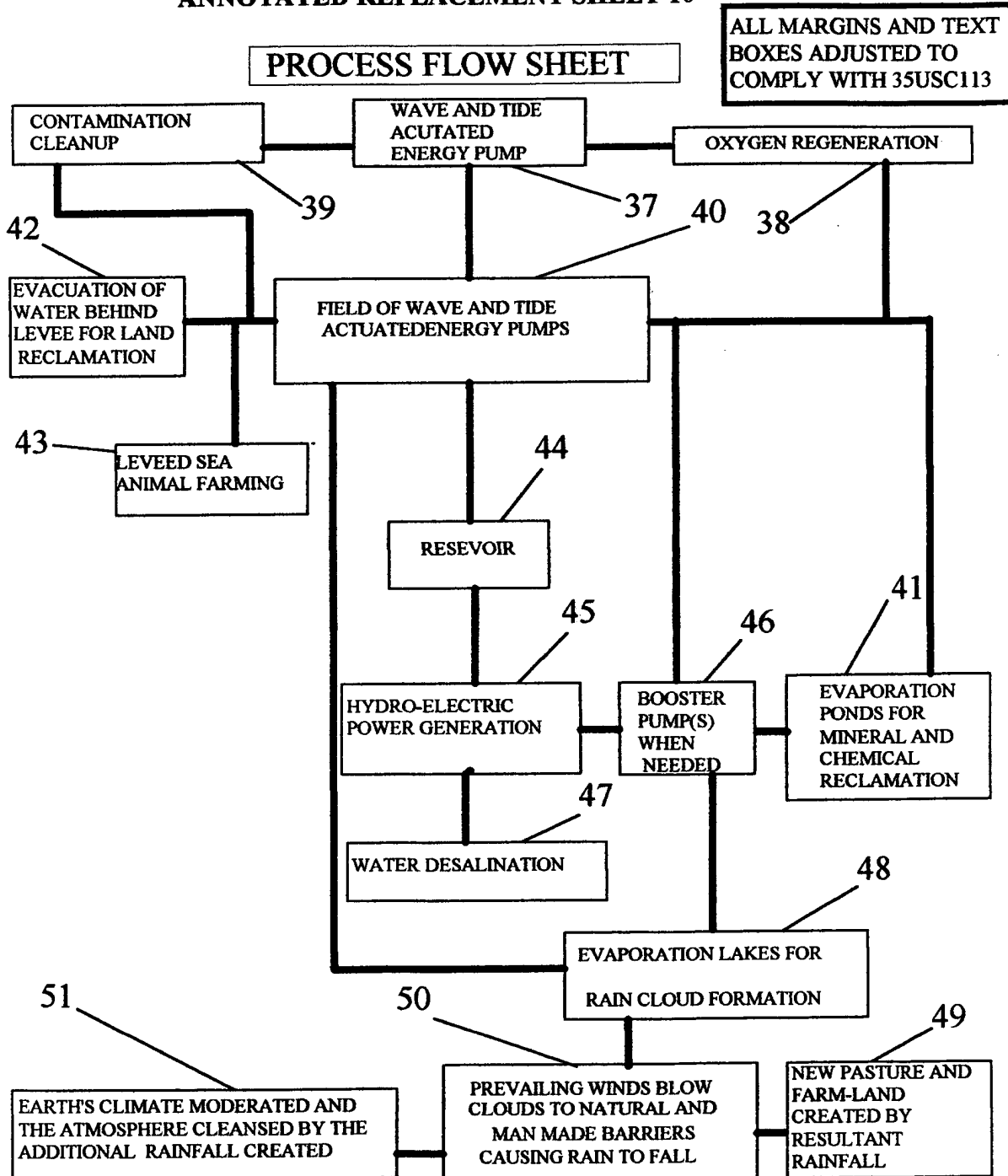


FIGURE 10